Computational Intelligence on Industry

Projects: iProMo & InGestAlgae

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iProMo

IngestAlgae

iProMo

iProMo

Intelligent Systems for Grinding Process Control

Cofinanciado por:

Ref.: CENTRO-01-0247-FEDER-069730

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https://ipromo-p2020.eu/

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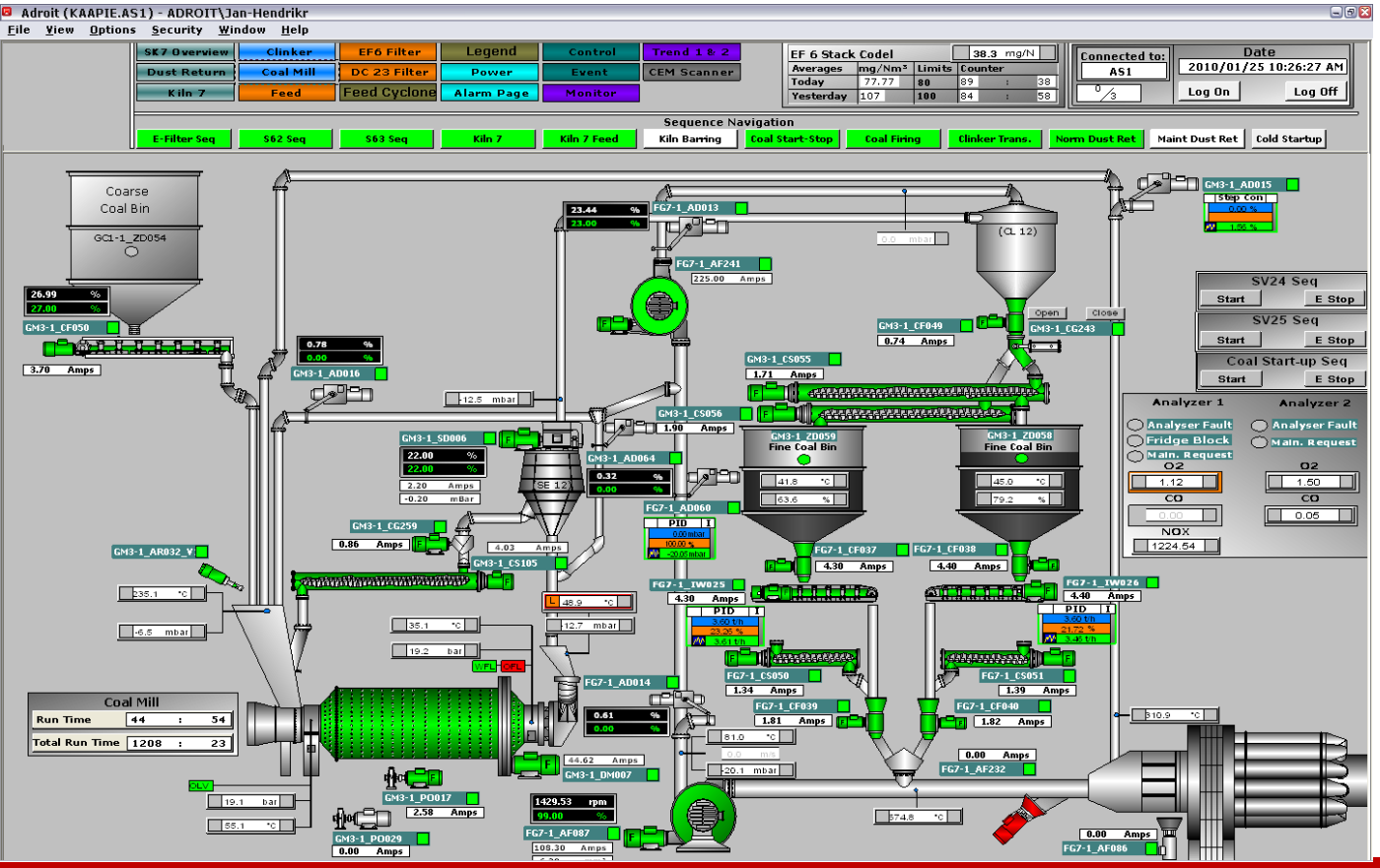
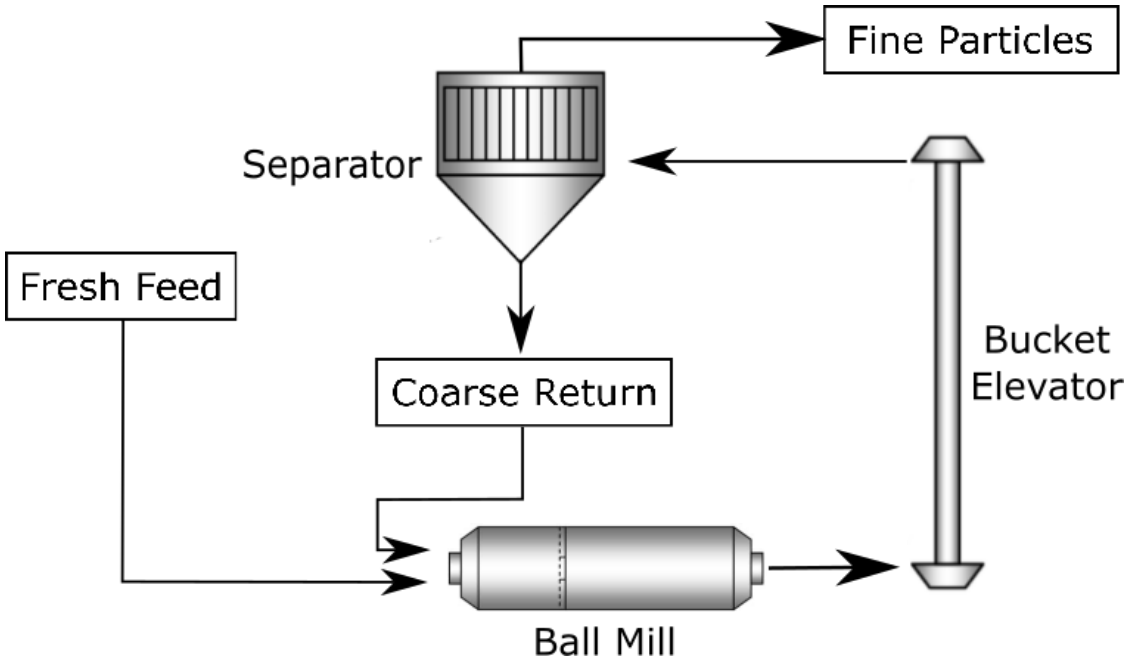
CIMPOR

Cement Grinding Circuit





Targets

- Develop an intelligent system for horizontal mills
  - increase the efficiency and minimize the downtime between failures.
- Real-time estimation of critical parameters, which cannot be measured
- Develop tools to support the maintenance and anomalies detection

Main Activities

A1 - Modular hardware architecture

A2 - Intelligent sensor for horizontal mills

A3 - Quality module

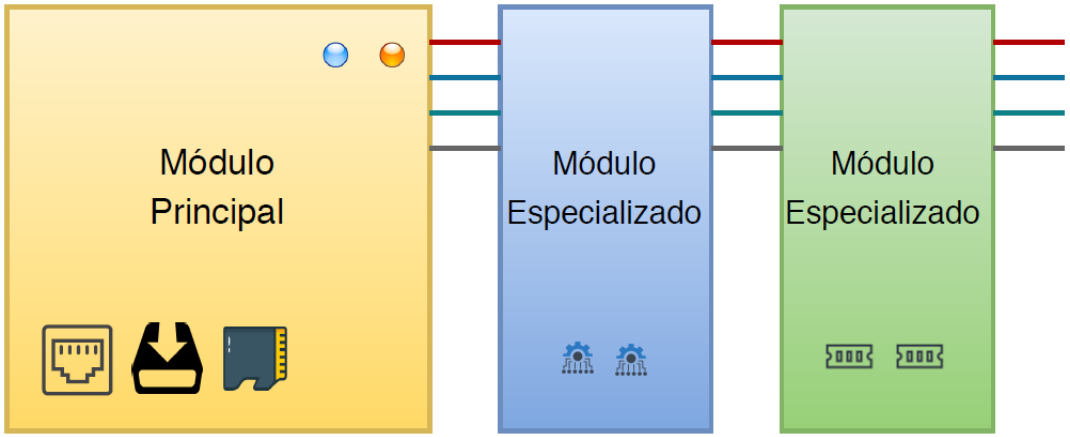
A4 - Predictive maintenance and sensor failure detection

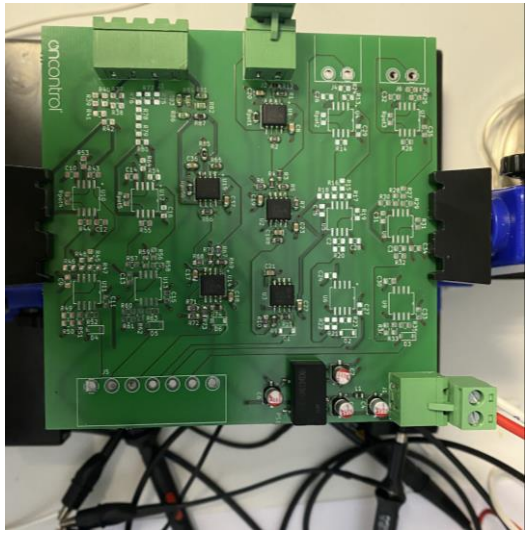
iProMo

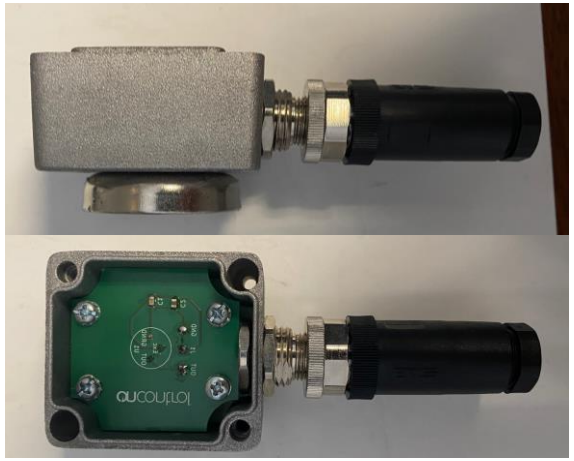
Modular hardware architecture

Development of a **modular and expandable hardware solution** dedicated to horizontal mills.

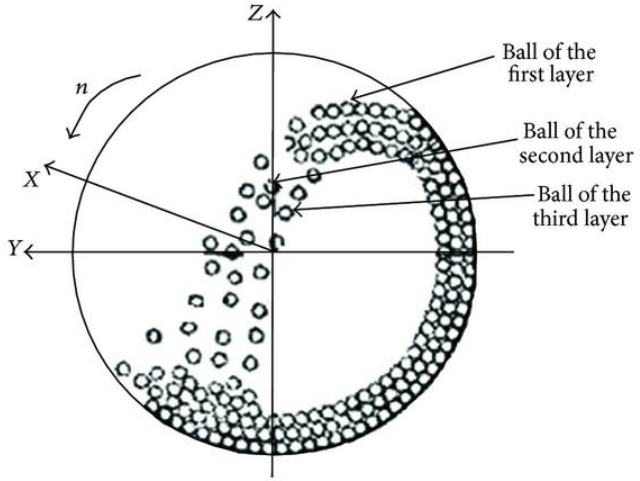
- Principal Module
- Vibration Module
- Electrical signals Module



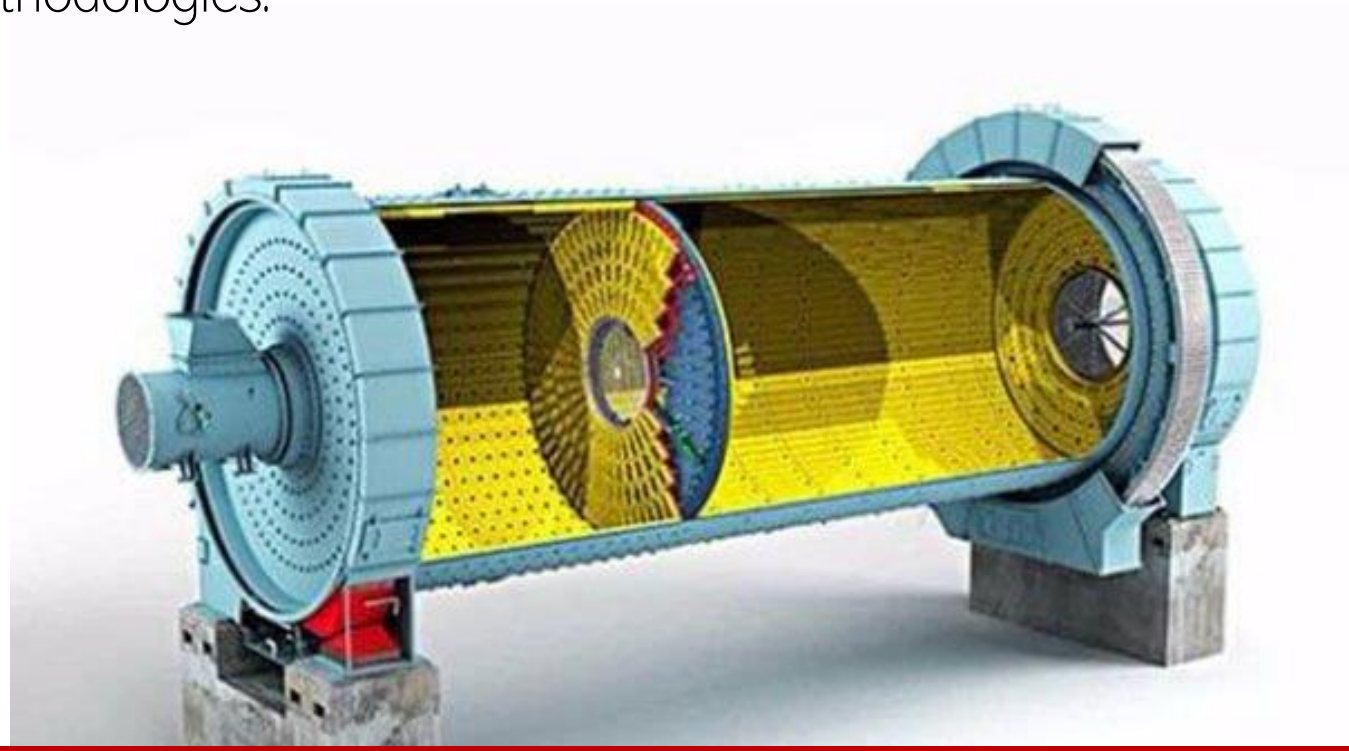




Intelligent sensor for horizontal mills



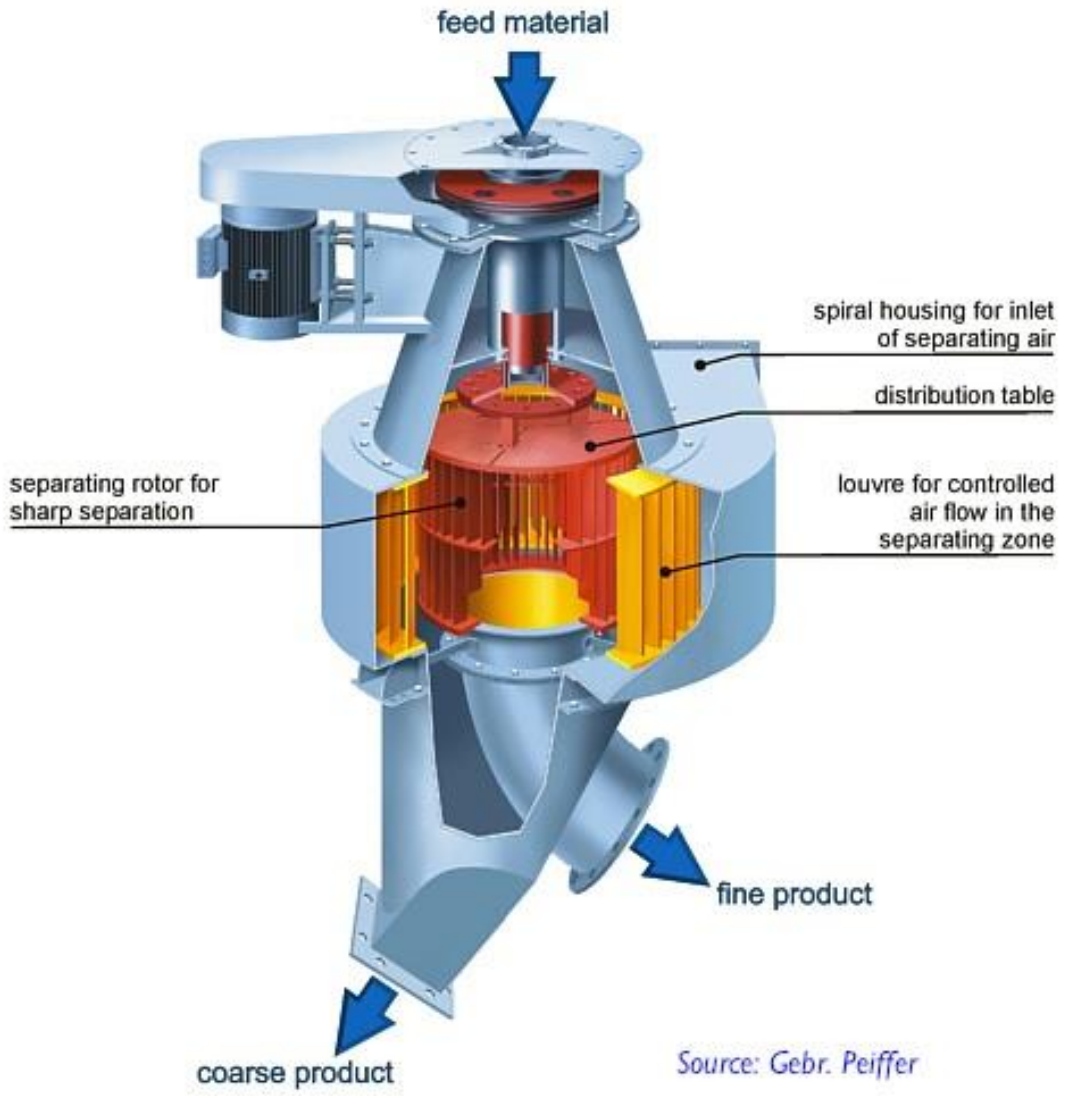
The goal is the development of intelligent sensors to **measure the level of horizontal mill** using **vibration signals** and computational intelligence methodologies.



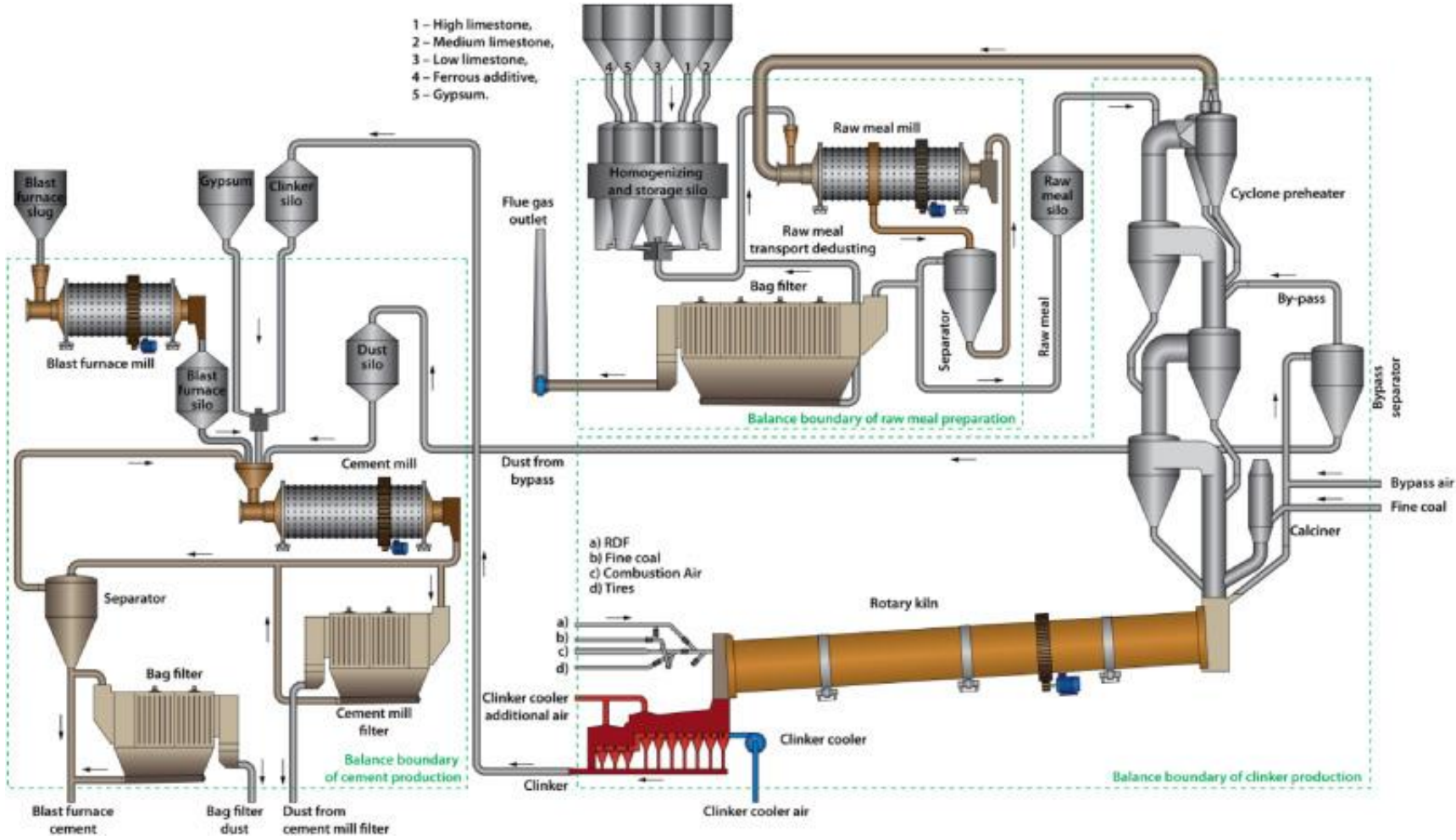
Particle size estimation

The objective is the estimation of particle size:

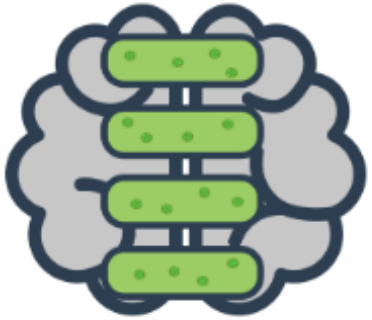
- "classical" modeling
- complemented by computational intelligence techniques.



Predict
1, 2, 7 and 28 days
Strength of Cement



InGestAlgae



IngestAlgae

Intelligent Platform for Microalgae Production Management

Cofinanciado por:

Ref.: CENTRO-01-0247-FEDER-046983

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BUGGY POWER

IngestAlgae

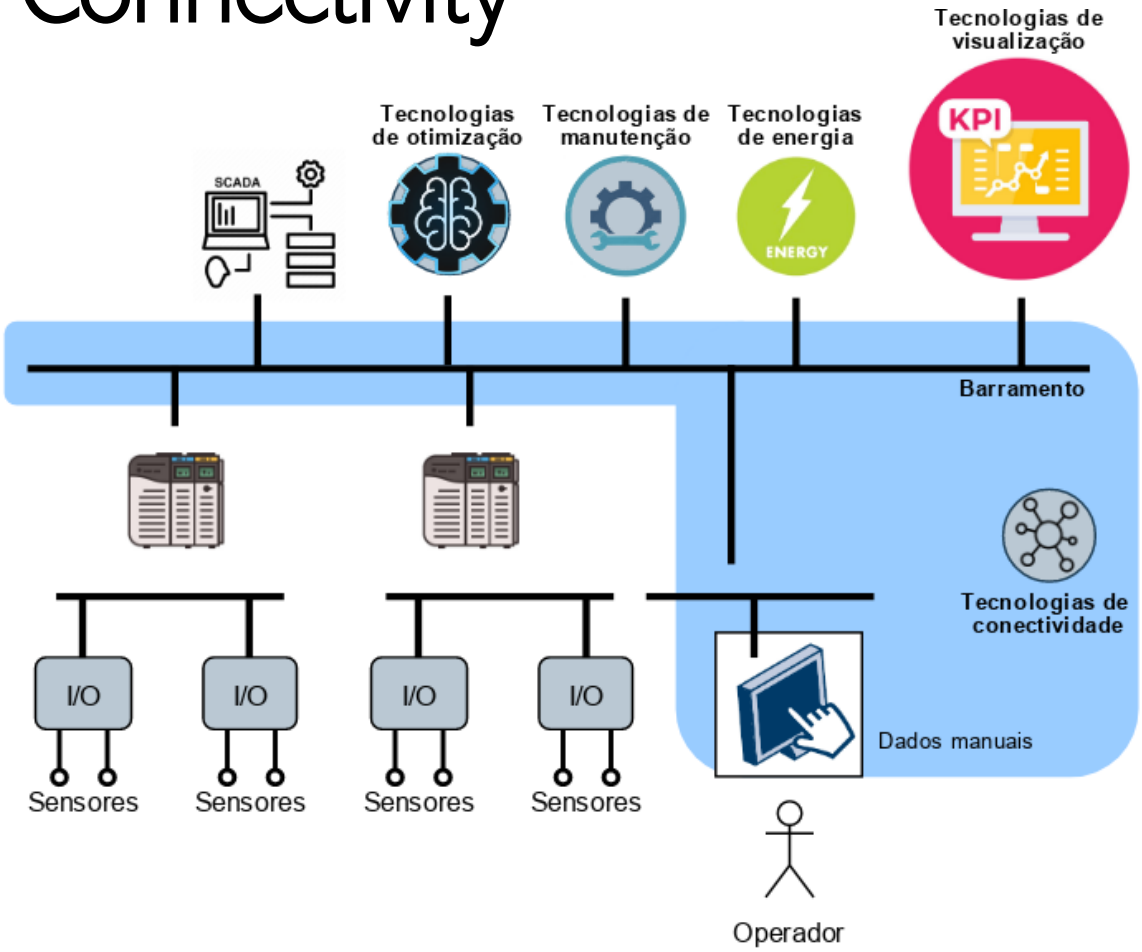
Target

- Optimization of the microalgae production process

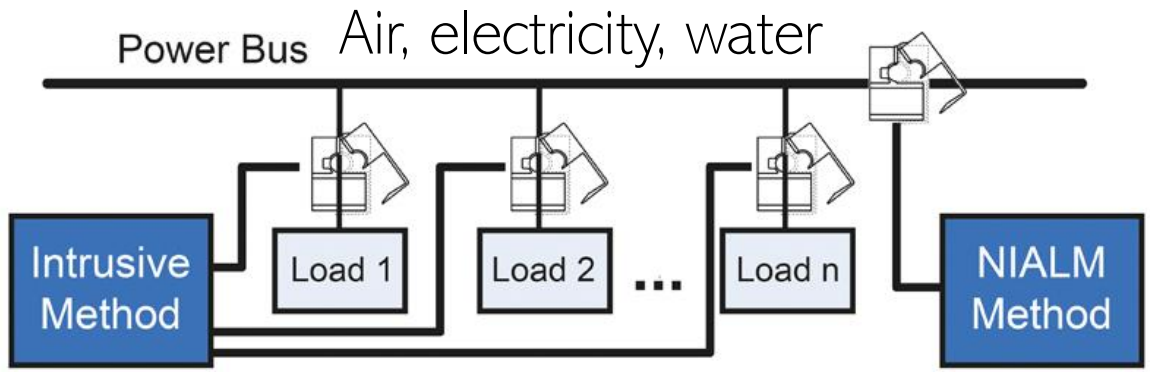
Main Activities

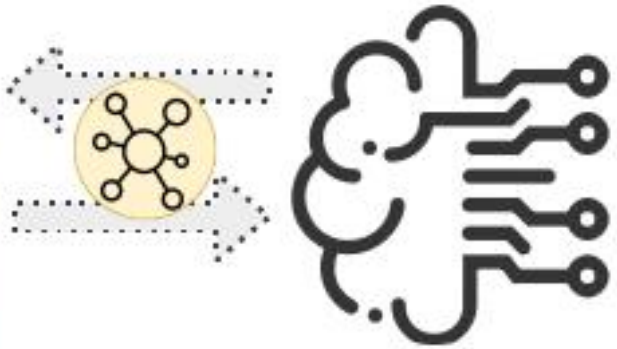
A1- Connectivity Technologies
A2 - Energy Technologies
A3 - Maintenance Technologies
A4 - Optimization Technologies
A5 - Visualization Technologies

Connectivity



Energy





pH control

detection of contaminants

Visualization

fastTracker: Real-Time Event-Driven Tracker for SCADA Systems
- Design of appropriate KPIs

1st Open day & Workshop @ISR-UC

Thank You